

What is claimed is:

1. A visual display system for producing a display image perceived as a far-focused virtual image by an operator, the display system comprising:
 - a video image generation system including an image generator for generating a video signal;
 - a video display, operatively connected to the image generator, for displaying a video image based on the generated video signal; and
 - a lens positioned between the operator and the video display, wherein the operator perceives through the lens the displayed image as a far-focused virtual image.
- 10 2. The visual display system of Claim 1, wherein the lens is a positive aspheric lens.
3. The visual display system of Claim 2, wherein the positive aspheric lens is a Fresnel type lens.
4. The visual display system of Claim 1, wherein the lens is an achromatic lens.
5. The visual display system of Claim 4, wherein the achromatic lens is a Fresnel type lens with color separation correction.
- 15 6. The visual display system of Claim 1, wherein the lens has an associated focal length designed such that the displayed image viewed through the lenses appears at a predetermined distance.
7. The visual display system of Claim 1, wherein the lens includes a planar surface.
- 20 8. The visual display system of Claim 7, wherein the lens is oriented substantially parallel to the video display and substantially perpendicular to a line extending from the operator's viewpoint.
9. The visual display system of Claim 1, wherein the lens is one or more optical elements for producing a substantially distortion-free, collimated image
- 25 10. The visual display system of Claim 1, wherein the video display includes a flat-panel display.



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11. A method for producing a display image operator perceived as a far-focused virtual image by an operator, the method comprising:

generating a video signal; and

displaying a video image on a display device based on the generated video signal;
5 and

positioning a lens between the operator and the video display, wherein the operator perceives through the lens the displayed image as a far-focused virtual image.

12. The method of Claim 11, wherein the lens has an associated focal length designed

10 such that the displayed image viewed through the lenses appears at a predetermined distance.

13. The method of Claim 11, wherein the lens includes a planar surface.

14. The method of Claim 13, wherein the lens is oriented parallel to the video display and substantially perpendicular to a line extending from the operator's viewpoint.

15. The method of Claim 11, wherein the lens is a positive aspheric lens.

16. The method of Claim 15, wherein the positive aspheric lens is a Fresnel type lens.

17. The method of Claim 11, wherein the lens is an achromatic lens.

18. The method of Claim 17, wherein the achromatic lens is a Fresnel type lens with color separation correction.

19. The method of Claim 11, wherein the lens is one or more optical elements for

20 producing a substantially distortion-free, collimated image

20. The method of Claim 11, wherein the video display includes a flat-panel display.

21. A visual display system for producing a display image perceived as a far-focused virtual image by an operator, the display system comprising:

25 a video image generation system including an image generator for generating a video signal;

a video display, operatively connected to the image generator, for displaying a video image based on the generated video signal; and



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5 a lens positioned between the operator and the video display, wherein the lens is an achromatic lens that includes a planar surface, wherein the operator perceives through the lens the displayed image as a far-focused virtual image, and wherein the lens has an associated focal length designed such that the displayed image viewed through the lenses appears at a predetermined distance.

22. The visual display system of Claim 21, wherein the lens is oriented parallel to the video display and substantially perpendicular to a line extending from the operator's viewpoint.

10 23. The visual display system of Claim 21, wherein the achromatic lens is a Fresnel type lens with color separation correction.

24. The visual display system of Claim 21, wherein the video display includes a flat-panel display.

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